

# **Current logistics trends and implications for AMR**

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# Current logistics trends and implications for AMR

- Last-mile home delivery
- Reverse logistics and consolidation
- The implications for AMR and cleaning regimes

## Last-mile food delivery



## Last-mile food delivery

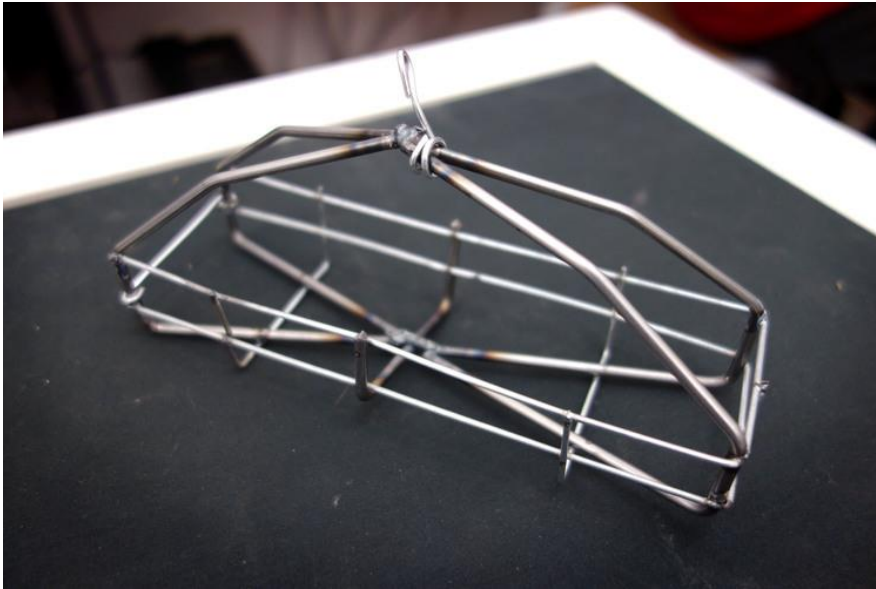




# Last-mile food delivery



# Last-mile food delivery



## Last-mile food delivery companies



amazon restaurants



UBER EATS



# Click and collect





# Reception Boxes



## Food home delivery issues

- Packaging either not designed to withstand temperature-specific foods or ill equipped to contain specific food types (e.g. condensation from fried foods)
- Hot and cold foods delivered in a single delivery bag, (sushi reached 80 °F )
- Hot and cold foods transported in close proximity
- Out-sourced delivery to ‘life-style’ couriers.

# Reverse Logistics



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<https://www.workplacesafetynorth.ca/sites/default/files/Unloading%20trucks%20-%20leaning%20bale.png>

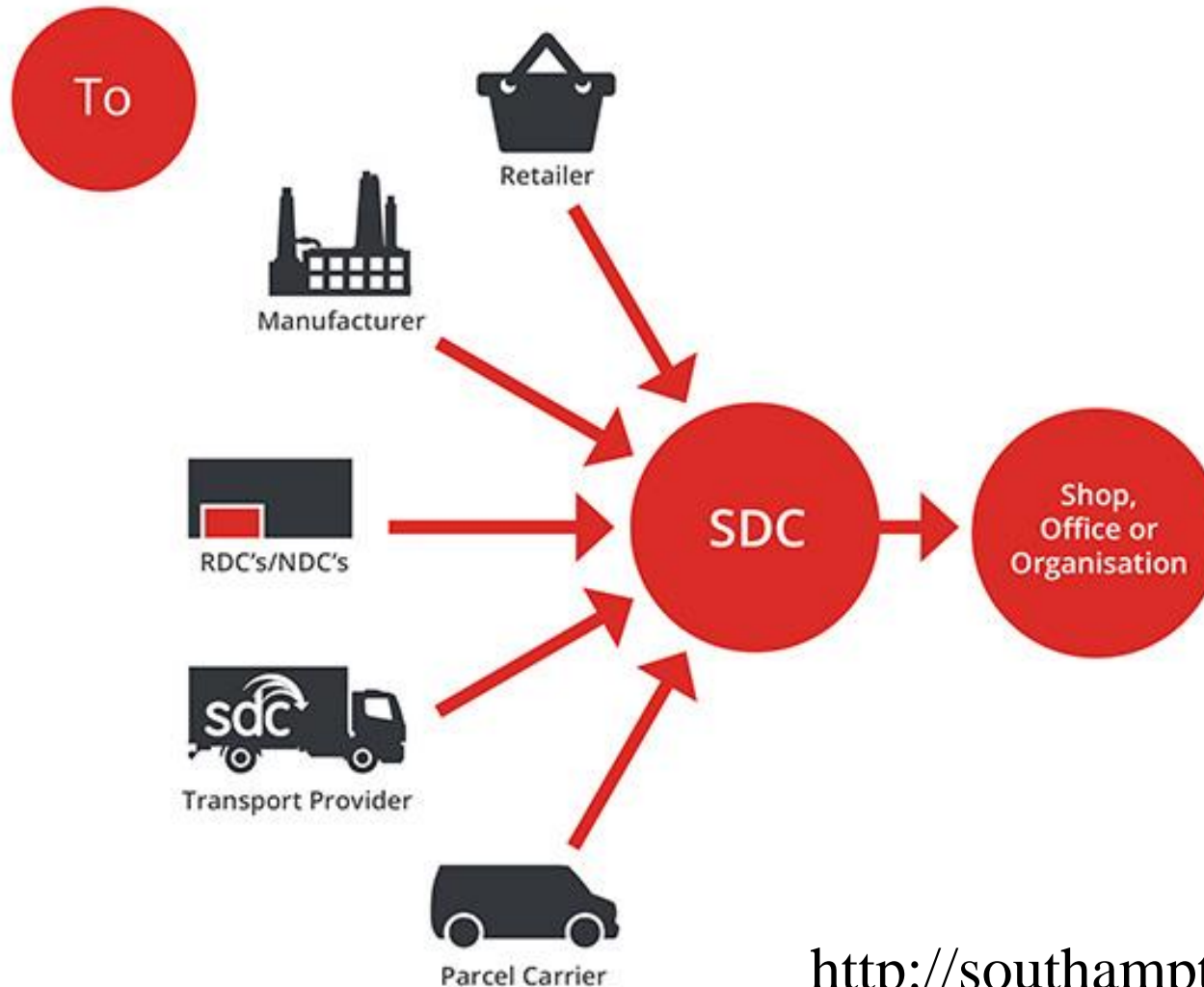
<http://www.dailymail.co.uk/news/article-3528182/They-smell-bad-washed-year-covered-mould-Asda-driver-reveals-inside-filthy-delivery-van-used-drop-customers-food.html>



# Future drivers in Logistics - Load Consolidation



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<http://southamptoncdc.co.uk/>

# Consolidation Centres



<http://assets.dft.gov.uk/publications/freight-consolidation-centre-study/summary.pdf>



## Conclusions

- Food home delivery growing significantly but links between logistics practices and AMR not well understood
- Reverse logistics practices encouraged to maximise use of assets but cross contamination issues
- Consolidation services (which could become more mandatory) add an additional link in the supply chain. What are the implications for AMR?